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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,473	01/10/2002	Anthony J. Cesaroni	33477.242985	9908

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EXAMINER
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KOCZO JR, MICHAEL

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 11/07/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/044,473

Applicant(s)

CESARONI ET AL.

Examiner

Michael Koczo, Jr.

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 7, 8 and 15-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This action is in response to applicant's amendment of September 22, 2003.

With regard to the prior Office action, the following errors have been discovered:

On page 2, line 9 should read --II. Claims 15 to 18...--.

On page 3, line 13, "18" should be deleted.

Any inconvenience that these errors may have caused is sincerely regretted.

### ***Election/Restrictions***

Applicant's election with traverse of the group I invention, species E and species S in Paper No. 9 is acknowledged. The traversal is on the ground(s) that the claims are allegedly directed to the same combination of elements since they depend from claim 1, and are therefore not subcombination claims. Applicant also argues that the examiner has not shown a separate utility for each group of inventions. This is not found persuasive.

The issue is whether or not the separate groups of inventions are distinct from each other. The fact that they all depend from linking claim 1 is not material. Applicant argues that the claims of group II are directed to the same combination of elements as the claims of group I. This is clearly incorrect. The group I invention requires that the hydrogen peroxide solution contains an additional oxidizer. The group II invention does not. The group II invention requires that the fuel grain contains a metal. The group I invention does not. Therefore groups I and II are directed to different subcombinations which are disclosed as being usable together. That is, as disclosed the propulsion system could have an hydrogen peroxide solution which contains an additional oxidizer and a fuel grain which contains metal. However, none of the

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claims recite these features in combination. Similar arguments apply to the remaining groups of inventions.

The fact that each group of inventions does not require the features of any of the other groups of inventions qualifies as a separate utility.

The requirement is still deemed proper and is therefore made FINAL.

Claims 7, 8 and 15 to 29 therefore stand withdrawn from further consideration as being drawn to non-elected inventions and species.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 22 and 24. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 to 6 and 9 to 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 1, reciting “introducing a stream of hydrogen peroxide or decomposed hydrogen peroxide” is improperly alternative.

Claim 9 is improperly alternative. Applicant may consider reciting the compositions in Markush form.

In claim 14, “such as chelating agents” is indefinite.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueno et al. Ueno et al. disclose a liquid fuel section 26 which contains hydrogen peroxide, a solid fuel section 16 (see figure 6), and an injector system (apertures 58a) located between the liquid fuel section and the solid fuel section for introducing a stream of decomposed hydrogen peroxide into the solid fuel section.

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bradford et al. Bradford et al. disclose a liquid fuel section 44 which contains hydrogen peroxide, a solid fuel section 58 and an injector system. A hypergolic fluid is injected which generates heat in order to aid in decomposing the hydrogen peroxide.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno et al. in view of Ayers et al. Ueno et al. disclose the invention substantially as claimed. However, Ueno et al. do not disclose the concentration of hydrogen peroxide. Ayers et al. disclose a method of operating a hybrid rocket wherein the concentration of hydrogen peroxide is 98 to 99 percent during the ignition stage, and can be from 0 to 99 percent upon ignition (col. 3 para. 1). In view of this teaching, it would have been obvious to use a concentration of hydrogen peroxide of from 70 to 90 percent.

Claims 11 to 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno et al. in view of Wagaman. Wagaman discloses a composition for a hybrid rocket which uses an oxidizer composed of hydrogen peroxide and ammonium nitrate which results in lower freezing points. In view of this teaching, it would have been obvious to include ammonium nitrate in the oxidizer solution of Ueno et al.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno et al. in view of Malin et al. Malin et al. disclose using stabilizers for preventing degradation of hydrogen peroxide which is used as an oxidizer for a rocket. In view of this teaching, it would have been obvious to provide the hydrogen peroxide of Ueno et al. with a stabilizer.

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Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno et al. in view of Smith et al. Smith et al. disclose that it is known in the prior art to mix an oxidizer such as ammonium dinitramide with a liquid oxidizer such as hydrogen peroxide (col. 2, lines 6 and 39). In view of this teaching, it would have been obvious to mix ammonium dinitramide with the hydrogen peroxide of Ueno et al.

#### *Allowable Subject Matter*

Claim 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

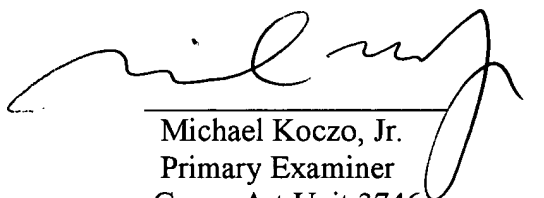
#### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is 703-306-5648.

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Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.



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